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10/606,450	06/26/2003	John C. Rudelic	ITL.1011US (P15536)	2953

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EXAMINER

DOAN, DUC T

ART UNIT	PAPER NUMBER
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2188

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/606,450

Applicant(s)

RUDELIC, JOHN C.

Examiner

Duc T. Doan

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-9, 11-15, 17-20 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 9 and 11-14 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 8, 15, 17-20 and 22-26 is/are rejected.
- 7) ☐ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/22/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***DETAIL ACTION***

***Status of Claims***

***Response to Amendment***

Claims 1-25 were pending in this application. In response to the last Office Action, Claims 1,4,7,9,11-12,14-15,17-18,22,24-25 were amended. Claims 5-6,10,16,21 were canceled. Claims 26-27 were added. As a result, claims 1-4,7-9,11-15,17-20,22-27 are remain pending in this application.

Claims 1-4,7-9,11-15,17-20,22-27 rejected.

Applicant's arguments filed 4/11/2005 have been fully considered but they are mooted in view of new ground(s) of rejection necessitated by the Applicant's amendments to the claims.

All rejections and objections not explicitly repeated below are withdrawn.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,4,7-8,15,17,22,24,26 rejected under 35 U.S.C. 103(a) as being unpatentable over Conley (US Pub 2002/0099904) in view of De Jong et al (US 6769053).

As for claim 1, Conley describes a method comprising: setting an update to data of a memory to a valid status via association of a valid count value therewith; and (Conley describes using a timestamp counter to determine the most recent change version of a data block due to an update write to the block; Conley's page 5, paragraph 56; Conley describes the updated data is written in a new block with an incrementing value of the counter. Conley's page 5, paragraph 51; Using the chronology values of the counter, the controller can easily determine the new and superseded copies of data which corresponding to the claim's valid status and backup status of data; Conley's paragraph 52); The claim further recites changing an original version of the data to a backup status via association of a second count value therewith in place of the valid count value. Conley does not describe the claim's detail of the second count value. However, De Jong describes a method in which version numbers are counted for a set of data, different version numbers relate to different generations for the data set (De Jong's column 2 lines 15-20). It would have been obvious to one of ordinary skill in the art at the time of invention to include the version number and associated method as suggested by De Jong in Conley's system thereby providing the application with an efficiently mechanism to identify which one of the version are older versions and quickly remove the original data set, once the data set in the updated version has been entirely completed (De Jong's column 1 lines 55-68).

As for claim 4, the claim recites reinstating the original version from the backup status to the valid status if the update is aborted. De Jong's column 5 lines 20-50 clearly describes unless

the updated data is completed verified valid, the data set in the original version will be used, thus changing its status to current version).

As for claim 7, the claim recites setting a second update to the data to the valid status via association of the valid count value therewith; and changing the update to the backup status via association of a third count value therewith in place of the valid count value. (Conley describes in paragraphs 56-57, the counter is used as the timestamp for each change in the data block. Therefore for the second update to the data block, an incrementing value of the counter will be assigned for the second update to the data, furthermore De Jong clearly teaches of utilizing values in both counts, version generation number and page number; DE Jong column 6 lines 5-35).

As for claim 8, the claim recites unwinding from the second update to one of the update or the original version. The claim rejected based on the same rationale as in the rejection of claim 4.

Claim 15 rejected based on the same rationale as in the rejection of claim 1. Conley 's paragraph 51 clearly describe the count #43 is used for all updating data.

Claim 17 rejected based on the same rationale as in the rejection of claim 15.

As for claim 22, the claim recites an apparatus comprising: at least one storage device to store code to set an update to data of a memory to a valid status and to change an original version of the data to a backup status. The claim rejected based on the same rationale as in the rejection of claims 9 and 12.

As for claim 24, Conley describes wherein the memory comprises a flash memory (Conley's paragraph 1).

Claim 25 rejected based on the same rationale as in the rejection of claim 19.

Claim 26 recites preventing a reclaiming operation on the original version of the data via the backup status. The claim rejected based on the same rationale as in the rejection of claim 4.

Claims 2,3,23 rejected under 35 U.S.C. 103(a) as being unpatentable over Conley (US Pub 2002/0099904), De Jong et al (US 6769053) as applied to claims 1,12,22 respectively and further in view of Matthews et al (US 5860124).

As for claim 2, the claim recites invalidating the original version if the update is committed. Conley does not describe the claim's detail of invalidating the original version. However, Matthews describes when the new data of the update write is written in a spare block, the "original" first block is invalidated (Matthews's column 7, lines 1-15). It would have been obvious to one of ordinary skill in the art at the time of invention to include the invalidating method as suggested by Matthews in Conley's system to prevent false operations to the older version of data (Matthews's column 8, lines 1-5).

As for claim 3, Conley describes reclaiming a space in the memory including the original version (Conley's paragraph 53).

Claim 23 rejected based on the same rationale as in claim 2.

Claims 18-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Conley (US Pub 2002/0099904) in view of De Jong et al (US 6769053) in further view of Hongo et al (US Pub 2003/0143971).

As for claim 18, the claim recites a system comprising: at least one storage device to store code to associate a count with a first modification to a data object, the count indicative of a valid status, associate the count with a second modification to the data object, and then associate a second count with the first modification, wherein the second count is indicative of a backup status; the claim rejected based on the same rationale as in the rejection of claim 1 and 15. The claim further recites and an antenna coupled to the at least one storage device. Conley does not describe the claim details of an antenna. However, a memory system coupled to an antenna has been well known in the art, particularly in the wireless communication area. This teaching is taught by Hongo et al (US Pub 2003.0143971; Fig 2: #200, #151, #230). It would have been obvious to one of ordinary skill in the art at the time of invention to include the antenna and packaging method as suggested by Hongo in Conley's system to provide transmitting and receiving radio module being packaged with memory components in a low cost board packaging. (Hongo's page 3, paragraphs 32,36).

As for claim 19, it is rejected based on the same rationale as in the rejection of claim 18. Hongo further describes a coprocessor coupled to the at least one storage device to perform the code (Hongo's Fig 2: #220, #230, #231).

As for claim 20, it is rejected based on the same rationale as in the rejection of claim 18. Hongo further describes wherein the coprocessor comprises a stacked processor of a multi-level flash memory (Hongo's page 9, paragraphs 108, 113 describes a memory/logic unit module in a three-dimensional stacked on one another).

Claim 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Conley (US Pub 2002/0099904), De Jong et al (US 6769053), Hongo et al (US Pub 2003/0143971) as applied to claim 24 and in view of Elmhurst et al (US 2004/0128594).

As for claim 25, the claim recites a coprocessor within the flash memory device to perform the code. Conley, De Jong, Hongo do not describes the claim's detail of circuits inside a flash memory. However, Elmhurst describes a micro controller (Fig 5: #230) inside a Flash memory device (Fig 5: #141) that is capable of processing a sequence of instructions to the flash device (see Fig 6). It would have been obvious to one of ordinary skill in the art at the time of invention to include the micro-controller as suggested by Elmhurst in Conley's system to off-loading the host CPU with tasks directly relating to the flash memory, thereby eliminating the host computer from running these time consuming tasks to each flash memory device (Elmhurst's page 1 paragraph 3-5).

*Allowable Subject Matter*

Claim 9 is allowable

Because claims 11-14 depend directly or indirectly on claim 9. These claims are considered allowable.

Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



*Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Applicant's amendment filed 8/18/03 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

When responding to the office action, Applicant is advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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7/19/01  
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SUPERVISORY PATENT EXAMINER